

Joseph * points out the distinctions of this species from *O. neglecta*, A. Schneider, in his detailed description of that form, which has eighteen anal papillæ besides the two larger ventral cirri.

5. *On the same Groups dredged in Norwegian Waters and in Finmark by Canon Norman.*

Both *Ophelia limacina*, H. R., *Ammotrypane aulogaster*, H. R., and the widely distributed *Travisia forbesii*, Johnston, are not uncommon in the fiords. Moreover, the finest example of the second comes from Finmark. *Ammotrypane* (*Ophelina*) *cylindricaudatus*, Hansen, likewise occurs in the same fiords near Bergen. *Scalibregma inflatum*, H. R., is often dredged in the same seas, but all the examples are small, especially in contrast with the large specimens from Lochmaddy, North Uist. No example of the Telethusæ is present, the absence of these littoral annelids being due to the fact that dredging alone was resorted to, and this in water of considerable depth.

EXPLANATION OF PLATE XVII. †

Fig. 1. *Ophelia radiata*, Delle Chiaje, in profile. Enlarged under a lens.

Fig. 2. Anterior end from the dorsum, to show the acutely conical snout and the ridges of the skin. Enlarged under a lens.

Fig. 3. Caudal processes from the dorsum. Enlarged under a lens.

Fig. 4. Caudal processes from the ventral surface. Similarly enlarged.

LXIII.—*On certain African and S.-American Otters.*

By OLDFIELD THOMAS.

SINCE I wrote my paper on the arrangement of the otters in 1889 ‡, opinion has changed as to the value of the characters which should justify generic distinction between different groups, and I am now prepared to admit, with other authors, that the clawless otters (*Aonyx*) and the margined-tailed otter of Brazil (*Pteronura*) should be recognized as generically different from the ordinary otters of the genus *Lutra*. The two species of *Aonyx*, *A. capensis* and *cinerea*, widely different

* Ann. Sc. Nat. 8^e sér. t. v. p. 369, pl. xxi. figs. 181-195, and pl. xxii. figs. 196-199.

† I am indebted to the courtesy of the Carnegie Trust for the figures on this Plate.

‡ P. Z. S. 1889, p. 190.

as they are in size and habitat, undoubtedly have a certain agreement in the shape of their skulls and teeth, so that their common non-possession of claws is evidently a genuine connecting character, and not a parallelism, as was formerly supposed to be the case.

Descriptions of a new subspecies of *Aonyx* and of the South-American species of the *Lutra platensis* group follow.

Aonyx capensis angolæ, subsp. n.

External characters much as in true *capensis*, though with rather a greater tendency to a whitening of the bases of the wool-hairs. Hairs of head and nape tipped with whitish. Ears with light edges. Hairs of chin and throat white to their bases, the brown round the angles of the mouth at a minimum. Second and third phalanges of fingers quite naked above.

Skull indicating affinity with *capensis* and *meneleki* rather than with *hindei*, agreeing with the two former by its greater size, as judged by length, its large flattened bullæ, and other characters. But it is conspicuously narrower in every breadth-measurement, the difference being so great as quite to alter the general proportions of the skull. Unfortunately the typical skull is that of a female, and allowance for this has to be made in comparing it with the other skulls and with those measured by Dr. Lönnberg. Interorbital region narrow, the interorbital breadth only about three fourths of that in a male *capensis*, the difference against the female being only about one-ninth in a pair of *hindei*. Post-orbital processes little developed, not projecting more than in a female *hindei*. Brain-case elongate-oval, longer and less broadened posteriorly and externally than in any others of the present group, its sides, when viewed from behind, more nearly vertical than in the other forms; its surface smooth and little ridged, though there is a fairly distinct median crest, and the lambdoid crests are well developed, meeting the sagittal one at a well-marked re-entrant angle. Zygomata unusually little spread, the zygomatic actually less than the mastoid breadth, while even the latter breadth is markedly less than in the allied forms. Bullæ broad and low, a single large foramen on the inner edge of each. Molars large and heavy, as in true *capensis*.

Total length, measured in flesh, 1270 mm., of which, judging from skin, the proportions would appear to be about:—

Head and body 800 mm.; tail 470.

Skull: basal length 128 mm.; zygomatic breadth 91.5; mastoid breadth 92.5; breadth of brain-case exclusive of mastoid flange 66; breadth of nasal opening 18; interorbital breadth 27; tip to tip of postorbital processes 30.5; intertemporal breadth 25.5; palate length 66; antero-posterior diameter of p^4 12.9; greatest diameter of m^1 18, antero-posterior diameter of its inner lobe 13; greatest height of zygomatic arch 10.

Hab. Coporole R., Angola.

Type. Adult female. B.M. no. 98. 3. 20. 1. Collected by Mr. G. W. Penrice.

I have hitherto not ventured to determine definitely this fine otter, partly owing to its being a female and partly for want of good S.-African material for comparison.

Now, however, that the Museum possesses a good adult pair of skulls of the nearly allied *A. c. hindei* of E. Africa, from which the differences due to sex can be estimated, and a good skull of the true S.-African *capensis* has been described and measured in Prof. Einar Lönnberg's recent interesting paper on the subject*, I am in a position to determine the Angolan form.

So far as sex is concerned, there appears to be remarkably little difference between male and female in the general outlines of the skull, the male having merely much more heavily roughened bones and larger crests and processes for the attachment of muscles. But the breadth as compared with the length measurements are practically the same in both sexes.

If therefore, as we may presume, the male *L. c. angolæ* has the same general proportions as the female, it will be readily seen from the above measurements and from those given in Prof. Lönnberg's paper how markedly the new form differs from any African otter hitherto described. As it happens, the chief length measurement is exactly the same in the type of *angolæ* and in Prof. Lönnberg's Natal example, while the zygomatic breadth is actually 13 mm. and the mastoid breadth 10 mm. less in the former than in the latter, a difference which naturally produces a very considerable alteration in general outline. But I suspect that the roughening of the bones and increase of the processes in the male will result in enough assimilation to *A. capensis* to justify my considering the Angolan otter as only a subspecies of that widely spread form.

* 'Arkiv för Zoologi,' iv. no. 12 (1908).

The Lutra platensis Group.

The difficulties presented by the members of this South-American group of otters were the chief reason for the incomplete state of the 1889 paper above quoted, and but little progress has been made in their elucidation to the present date.

The only two points that have been published about them are that Nehring* has shown the earliest name, *paranensis*, Rengger, to have been based on the large *Pteronura brasiliensis*, so as to remove that name from the group, and that Dr. Major has described the Central-American form as a distinct species, *L. annectens*.

Material has, however, been gradually accumulating, and I am now in a position to sort this difficult group into seven fairly distinct forms, of which the characters and distribution are as follows:—

1. *Lutra annectens*, Maj.

Ann. & Mag. Nat. Hist. (6) xix. p. 618 (1897); Zool. Anz. 1897, pp. 136-142.

Nose-pad quite naked, its upper line of demarcation with a distinct upward projection in the centre, as in the European otter, *L. lutra*.

Skull very broad and low, with broad flattened brain-case and widely expanded mastoid processes. Nasal opening fairly narrow, its breadth less than its slanting internal height-length diameter. Bullæ well swollen.

Upper carnassial not very large, the hinder edge of its inner lobe not touching the front of m^1 .

A male skull measures in condylo-basal length 117 mm.; zygomatic breadth 80; mastoid breadth 78; antero-posterior diameter of p^4 10.2.

Hab. Central America: Tepic, Jalisco, Mexico (*Buller*); Guatemala (*Salvin*).

Type in British Museum, no. 92. 3. 17. 8.

2. *Lutra emerita*, sp. n.

Nose-pad as in *annectens*.

Size rather less than in that species. Skull with comparatively large, rounded, and high brain-case, the height greater and the breadth less than in the Central-American species. Upper profile convex. Sagittal crest little developed;

* SB. Ges. nat. Freund. Berl. 1900, p. 221.

lambdoid crests well-marked, and, owing to the shape of the brain-case, surpassing behind the back of the condyles. Mastoid flanges not excessively developed. Nasal opening small, its proportions about as in *annectens*. Bullæ rising to a high and rather narrower ridge than in *annectens*. Teeth about as in that species.

Skull-measurements (adult male): condylo-basal length 110 mm.; basal length 101; zygomatic breadth 77.5; mastoid breadth 71; interorbital breadth 22.6; brain-case, breadth 62; height from between bullæ to crown 41; palatal length 49; antero-posterior diameter of p^4 10.1; greatest diagonal diameter of m^1 11.4.

Hab. Merida, Venezuela. Type from the Rio Chama at 2000 m. altitude.

Type. Adult male. Collected 13th August, 1907, by S. Briceño. Two specimens examined.

This species is readily distinguishable from all the members of the group by its high rounded brain-case, and from the two which share the structure of its nose-pad by its markedly smaller size.

3. *Lutra provocax*, sp. n.

Nose-pad as in *annectens*, therefore markedly different from that of the geographically nearer *L. platensis*.

Skull about as large as in *annectens*, its frontal region particularly flat and the upper profile comparatively straight. Nasal opening, owing to the flattening of the muzzle, broader in proportion to its height, its breadth more than its internal height-length diameter. Sagittal crest little developed, and the lambdoid not projected far back. Bullæ rather small. Teeth of medium strength, the inner lobe of p^4 not excessively large, but touching the front of m^1 owing to a projection at its postero-external border.

Skull-dimensions of type (old male): condylo-basal length 115 mm.; basal length 106; zygomatic breadth 78.5; mastoid breadth 74; interorbital breadth 25; brain-case, breadth 58, height 38; palatal length 56; antero-posterior diameter of p^4 11.7; greatest diagonal diameter of m^1 13.5.

A female skull has condylo-basal length 109 mm.; mastoid breadth 74; p^4 101.

Hab. Southern Chili and Patagonia. Type from south of Lake Nahuel Huapi, Patagonia. Other specimens from Temuco, S. Chili (*Bullock*), and Magellan Straits (Voyages of H.M.S.S. 'Challenger' and 'Alert,' and of Lord Crawford's yacht the 'Valhalla').

Type. Old male. B.M. no. 3. 11. 5. 14. Collected during

the Chili-Argentine Frontier Commission, and presented by Sir Thomas Holdich.

This otter occurs side by side with *L. felina* along the coasts of Southern Chili and in the Straits of Magellan, where it was first obtained during the voyage of the 'Challenger,' and later on in the same region by Dr. Coppinger of H.M.S. 'Alert.' I have long doubted my provisional reference of it to *L. platensis*, from which I now find it can always be distinguished by the different structure of its nose-pad and the flattening of its muzzle, with the consequent alteration in the form of the nasal opening in the skull.

4. *Lutra platensis*, Waterh.

Voy. Beagle, Mamm. p. 21, pl. xxxv. fig. 4 (skull) (1838). (Maldonado, Uruguay.)

Lutra solitaria, Wagn. Arch. f. Nat. 1842, p. 358. (Ypanema, São Paulo.)

Lutra latifrons, Nehr. SB. Ges. nat. Berl. 1887, p. 23. ("S. America, east of Andes.")

Nose-pad naked, its upper line of demarcation running either straight across or even curving somewhat downwards towards the septum, its definition always sharp and well marked.

Skull larger and well ridged, not unusually flattened. Nasal opening comparatively narrow, its breadth distinctly less than its interior height-length diameter. Bullæ well swollen. p^4 large, with broadly expanded inner lobe.

In an old male the skull-measurements are: condylo-basal length 114.5 mm.; mastoid breadth 72.5; antero-posterior diameter of p^4 12.5.

Hab. Southern Brazil, Uruguay, and Argentina; inland to Matto Grosso. Examples in Museum from Rio Grande do Sul (*Ihering*), Uruguay (*Darwin*, *Aplin*), and Buenos Ayres (*Lord Lilford*).

Type skull in British Museum, no. 55. 12. 26. 215.

5. *Lutra incarum*, sp. n.

Nose-pad ill-defined, the hairy part from above projecting downwards in the middle without any very clear line of demarcation, and in some cases almost or quite meeting a corresponding upward projection from below. There is, however, never a broad continuous band of hair down the septum as there is in *L. enudris*. In old specimens a good deal of the hair may be worn off, but traces of it are to be seen with a lens.

General colour rather paler than usual.

Skull and teeth large and heavy, apparently quite similar to those of *L. platensis*, though the inner lobe of p^4 averages rather smaller.

The type skull (young) has a p^4 measurement of 12.4 mm.

An old male skull from Eten gives the following dimensions:—Condyllo-basal length 118 mm.; zygomatic breadth 77.5; mastoid breadth 72; interorbital breadth 24.8; palate length 54.

Hab. Peru. Type from Marcapata, Prov. Cuzco. Other specimens from Eten on the N.W. coast (*P. O. Simons*).

This otter is most nearly allied to *L. platensis*, of which it may hereafter prove to be a subspecies, when specimens from intermediate localities are available for comparison.

Two other otters have been described from Peru, *L. peruviansis*, Gervais, and *L. montana*, Tschudi. The former was based on a skull picked up on San Lorenzo Island, off Callao, and has long been synonymized with *L. cinerea*, Molina, the small Chilean otter. That this reference is correct is now proved by the examination of a specimen obtained by Mr. Perry Simons on that very island, a specimen which precisely agrees with Gervais's figure and also with specimens of *L. cinerea* from Chili.

With regard to *L. montana*, it is difficult to believe that the animal Tschudi described was an otter at all, as of no member of the genus can it be said that "der Unterleib ist schwarzlich," that "die Füße sind schwarz," or that "die Wollhaare sind glänzend schwarz." Possibly Tschudi heard accounts of the "Lebensweise und geographische Verbreitung" of this species, and then had palmed off on him as an otter an imperfect skin of some other animal altogether, possibly a *Tayra*, which he described.

No specimen is preserved under the name of *L. montana* in the Museum at Neuchâtel, where I have been able to examine the majority of Tschudi's types.

6. *Lutra mitis*, sp. n.

Nose-pad as in *L. incarum*, but rather more hairy, the hair above generally connected by a narrow mesial line with that below, though often more or less worn off in old specimens. In the most hairy specimens the band may attain at its narrowest part a breadth of about 2-3 mm., but it is more often about 1 mm. in breadth when not worn down.

General colour dark.

Skull smaller and lighter than in any other of the present

group of otters, with comparatively narrow interorbital region, small nasal opening, little expanded mastoid flanges, and small though well-swollen bullæ. Teeth light and delicate, the inner lobe of p^4 small.

Dimensions of the type skull (adult male):—Condylobasal length 103·5 mm.; basal length 94·5; zygomatic breadth 68; mastoid breadth 65; breadth of nasal opening 11·5; interorbital breadth 20; height of brain-case 37; palate length 47; antero-posterior diameter of p^4 10·6; greatest diameter of m^1 12·7.

Hab. Guiana and Eastern Brazil. Type from Surinam, other specimens from Cayenne (*Stevens*), Para (*Robert*), and Porto Real, Rio Janeiro (*Hardy du Déneuf*).

Type. Adult male. B.M. no. 86. 5. 12. 1*. Collected by Kappler.

This otter was considered by Gray to be F. Cuvier's *L. enudris* (*L. "enhydris"*), but the particulars which Prof. Trouessart has been so good as to give me of the typical skull of that species indicate that the latter is the larger and not the smaller Guianan otter.

7. *Lutra enudris*, F. Cuv.

Dict. Sci. Nat. xxvii. p. 242 (1823). (Guiana.)

Lutra insularis, id. t. c. p. 243. (Trinidad.)

Lutra enhydris, auct. (emend.).

Nose-pad with an unbroken band of hair passing down the nasal septum between the nostrils, 3–5 mm. in breadth at its narrowest point.

Size comparatively large, about as in *L. platensis*.

Skull much as in *L. platensis*, neither specially high nor flattened. Bullæ well swollen. Teeth large and heavy, the antero-posterior diameter of p^4 exceeding that of any other species of the group.

Dimensions of the type skull in the Paris Museum, kindly furnished me by Prof. Trouessart:—Length 112 mm.; breadth 80; p^4 , external length 14, greatest diameter (diagonally) 15, antero-posterior diameter 13.

Hab. Guiana and Trinidad.

Type skull in the Paris Museum.

Of this fine species the British Museum possesses an adult male skull from Demerara belonging to a specimen now

* Skull and skin having come separately, and a certain doubt being possible as to their belonging to each other, I would definitely select the skull as the type. The nose-pad of this specimen is damaged, but another skin that came with it shows the hairy structure particularly well.

mounted in the British Guiana Museum which I examined some years ago, and noted the characters of its nose-pad. This skull closely agrees with the dimensions of F. Cuvier's type kindly supplied to me by Prof. Trouessart.

In addition we have a skin without skull from Trinidad, therefore a topotype of F. Cuvier's *L. insularis*, which it may be taken to represent.

Unfortunately, as Prof. Trouessart informs me, the typical mounted skins of neither *L. enudris* nor *L. insularis* are now to be found in the Paris Museum. Happily by the help of the type skull of the former and the British Museum topotype of the latter we are able to identify both with practical certainty.

LXIV.—*The Inclusion of Foreign Bodies by Sponges, with a Description of a new Genus and Species of Monaxonida.*
By IGERNA B. J. SOLLAS.

OWING to the kindness of the captain of the 'Durham Castle' the Members of the British Association were allowed to land at Mozambique and at Mombasa on the homeward journey from South Africa in September 1905. An opportunity of half an hour's shore-collecting was thus afforded, and at Mozambique there was a rich growth of sponges, particularly of *Cinachyra voeltzkowi*, Lfd. One sponge, *Migas porphyron*, gen. et sp. n., which, owing to its consistency and general appearance, I supposed would prove to be a member of the Ceratosa, is, in fact, an interesting form of Monaxonida which possesses a skeleton consisting of both "proper" spicules and foreign bodies. Certain features in the cortex of this specimen seem to me to throw some light on the method by which foreign bodies are included in this case and possibly also in the case of other sponges.

Migas porphyron is a massive sponge; the surface is raised into a system of low ridges. The single specimen which I possess measures 4.5 × 2.5 cm. A fine individual of *Cinachyra voeltzkowi* has fixed and grown upon a part of its surface. The colour when living was dark purple, outwardly buff in the deeper parts; in spirit the purple has turned to grey. The dark pigment is contained in the granular cells of the cortex. The cortex is .8 mm. at its greatest thickness and contains large cavities. The chambers are very small, .015 mm. in diameter, few and aphodal.